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Europäisches  
Patentamt

Zweigstelle  
in Den Haag  
Recherchen-  
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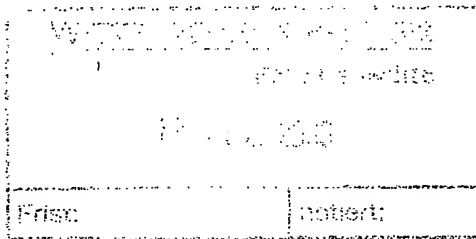
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Eingang bei ZPT  
11. DEZ. 2003  
Term.  
Bearb.

Datum/Date

03.12.03

Zeichen/Ref./Réf.

1031P115EP TD c

Anmeldung Nr./Application No./Demande n°./Patent Nr./Patent No./Brevet n°.

03360030.5-1237-

Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire

ALCATEL

## COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☒ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

☒ abstract

☒ title

☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract: 1

## REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 917 625 A (OGUSU MASAHIRO ET AL) 29 June 1999 (1999-06-29) * column 16, line 35 - line 64 * * column 21, line 16 - line 19 * * column 22, line 27 - line 35 * * figures 19,20 * * figure 22 * * figure 30 *	1-4,6-12	H04J14/02 G02B6/34
A	EP 1 091 509 A (FUJITSU LTD) 11 April 2001 (2001-04-11) * paragraph '0023! - paragraph '0025! * * figure 1 *	1,10	
D,A	WO 02 067475 A (RASMUSSEN MICHAEL ;IBSEN PER ELD (DK); ROSE BJARKE (DK); BASTU JEN) 29 August 2002 (2002-08-29) * figure 2 * * figure 20 *	1-12	
A	US 4 836 634 A (LAUDE JEAN-PIERRE) 6 June 1989 (1989-06-06) * the whole document *	1-12	TECHNICAL FIELDS SEARCHED (Int.Cl.7) H04J G02B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 6 November 2003	Examiner Fleckinger, C
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 03 36 0030

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

06-11-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5917625 A	29-06-1999	JP 7077627 A	20-03-1995
		JP 8005861 A	12-01-1996
EP 1091509 A	11-04-2001	JP 2001102666 A	13-04-2001
		EP 1091509 A2	11-04-2001
WO 02067475 A	29-08-2002	US 2002154855 A1	24-10-2002
		WO 02067475 A2	29-08-2002
US 4836634 A	06-06-1989	FR 2479981 A1	09-10-1981
		FR 2491211 A2	02-04-1982
		FR 2496260 A2	18-06-1982
		FR 2519148 A1	01-07-1983
		DE 3164116 D1	19-07-1984
		DK 156381 A	09-10-1981
		EP 0037787 A1	14-10-1981
		AT 14263 T	15-07-1985
		DE 3264696 D1	14-08-1985
		EP 0083542 A1	13-07-1983
		JP 58160917 A	24-09-1983
		US 4583820 A	22-04-1986



This application is covered by the extended European search report pilot project at present running within the European Patent Office, applied to all European patent applications filed as first filing and searched on or after 01.07.03. Under this project the EPO issues together with the search report an opinion on whether the application and the invention to which it relates meet the requirements of the EPC. This non-binding opinion is issued free of charge as a service. This opinion may be used as the basis for an informed decision as to whether it is desired to pursue the application further or not.

For further details of this pilot project, the applicant's attention is directed to the Official Journal edition 5/2003. If any further immediate questions or comments arise the EPO Customer Services: +31-70-340 4500 or +49-89-2399 2828 can be contacted.

**The attached opinion reveals that the application or the invention to which it relates appear not to meet the requirements of the Convention** (see comments on enclosed Form 2906).

If the applicant wishes to continue with this application the examination fee must be paid. Where appropriate amendments can be filed to address the objections raised in the opinion, thus shortening the overall procedure. If no amendments are filed, the opinion will be re-issued as the first official communication under Article 96(2) and Rule 51(2) EPC.

If the examination fee has already been paid and the right to the communication under Article 96(1) EPC has been waived for this application, the first official communication under Article 96(2) and Rule 51(2) EPC will be issued promptly.

Should the present application have been considered by the examiner as lacking Unity of invention under Article 82 EPC to an extent preventing performance of a full search, a separate communication to this effect will be sent as laid down in Rule 46 EPC. The text of the extended European search report will make reference to the non-unity objection and the searched subject-matter but will not normally make further reference to the unsearched matter. Only that matter searched in the initial search report will be the subject of a communication under the extended European search report pilot project



The examination is being carried out on the **following application documents**:

Text for the Contracting States;

AT BE BG CH LI CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT SE SI SK TR

**Description, pages:**

1-16 as originally filed

**Claims, No.:**

1-12 as originally filed

**Drawings, sheets:**

1/3-3/3 as originally filed

1 The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: US-A-5 917 625 (OGUSU MASAHIRO ET AL) 29 June 1999 (1999-06-29)  
D2: EP-A-1 091 509 (FUJITSU LTD) 11 April 2001 (2001-04-11)

2 The present application does not meet the requirements of Article 52(1) EPC, because the subject-matter of **claims 1-4,6-12** does not involve an inventive step in the sense of Article 56 EPC.

2.1 The document D1 discloses (the references in parentheses applying to this document):  
an optical device (Fig.19) for multiplexing and demultiplexing optical signals having a plurality of wavelength separated channels, said device comprising:  
a multiple channel port (101<sub>1</sub>),  
at least a first and second separated channel port (101<sub>n</sub>), and  
a diffraction unit defining wavelength specific beam paths for optical beams (108,105,107,108) between the multiple channel port and the separated channel ports, said diffraction unit including a diffraction grating (105) and a mirror(106) adapted for receiving (105) and reflecting the optical beams (107) from and to the diffraction grating.

The subject-matter of claim 1 differs from document D1, which is considered to



represent the most relevant state of the art, in that the mirror is replaced by a plurality of mirrors individually angled for reflecting the optical beams at different angles. The problem to be solved by the present invention may therefore be regarded as enhancing the spatial separation from wavelengths or wavelength bands.

The mirror used in the prior art is reflecting the wavelength specific optical beams with different angles. The person skilled in the art would directly think about increasing the spatial separation of the beams by increasing the angle difference by using a plurality of mirrors individually angled as described in claim 1.

Therefore **independent claim 1** does not involve an inventive step in the sense of Article 56 EPC.

This objection applies also to the corresponding method **claim 12**.

**2.2 Dependent claims 2-4,6-11** do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC with respect to inventive step, the reasons being as follows:

- in claim 2-4,6-7 a slight constructional change in the optical device of claim 1 is suggested which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can be readily contemplated in advance;
- claims 8-11 are standard utilisation of the optical device of claim 1 in more complex devices (see for instance D2 for claims 9, 10).

**3** The applicant is requested to file a new set of claims which take account of the above comments.

**3.1** The combination of the features of dependent claim 5 is neither known from, nor rendered obvious by, the available prior art. It is suggested therefore that a new independent claim be drafted to include these features, bearing in mind that the features known in combination in D1 should be placed in the preamble of such a claim in accordance with Rule 29(1) EPC.

**3.2** Document D1, which appears to represent the most relevant prior art, should be acknowledged in the description (Rule (1)(b) EPC).

**3.3** Also, amendments should be filed by way of replacement pages and it should be indicated on which passages of the original application these amendments are based (Guidelines E-II, 1).

**3.4** When filing amended claims the applicant should at the same time bring the description into conformity with the amended claims. Care should be taken during revision, especially of the introductory portion and any statements of problem or advantage, not to add subject-matter which extends beyond the content of the



Bescheid/Protokoll (Anlage)

Communication/Minutes (Annex)

Notification/Procès-verbal (Annexe)

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3

Anmelde-Nr.:  
Application No.: 03 360 030.5  
Demande n°:

application as originally filed (Art. 123(2) EPC).

3.5 In order to facilitate the examination of the conformity of the amended application with the requirements of Article 123(2) EPC, the applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based.

3.6 If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.